

PERAC AUDIT REPORT



Worcester Contributory Retirement System

JAN. 1, 2000 - DEC. 31, 2003 / PERAC 03: 11-100-31



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PERAC

COMMONWEALTH OF MASSACHUSETTS | PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION

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JOSEPH E. CONNARTON, *Executive Director*

June 27, 2005

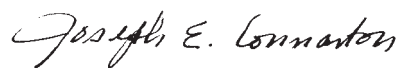
The Public Employee Retirement Administration Commission has completed an examination of the Worcester Retirement System pursuant to G.L. c. 32, § 21. The examination covered the period from January 1, 2001 to December 31, 2003. This audit was conducted in accordance with the accounting and management standards established by the Public Employee Retirement Administration Commission in regulation 840 CMR 25.00. Additionally, all supplementary regulations approved by PERAC and on file at PERAC are listed in this report.

In our opinion, the financial records and management functions are being performed in conformity with the standards established by the Public Employee Retirement Administration Commission with the exception of those noted in the findings presented in this report.

We congratulate the Worcester Retirement System for being awarded a Certificate of Achievement for Excellence in Financial Reporting for the fiscal year ended December 31, 2003. The Government Finance Officers Association of the United States and Canada (GFOA) presented this award in recognition of the System's "Comprehensive Annual Financial Report".

In closing, I acknowledge the work of examiner Richard Ackerson who conducted this examination and expresses appreciation to the Board of Retirement and staff for their courtesy and cooperation.

Sincerely,



Joseph E. Connarton
Executive Director



Worcester Retirement System

EXPLANATION OF FINDINGS AND RECOMMENDATIONS

FOR THE THREE YEAR PERIOD ENDING DECEMBER 31, 2003

1. Annuity Savings Records

The Retirement System is maintaining two sets of member's Annuity Savings Records. They are maintaining an automated system and also a manual record. This was also a finding in the previous audit report. The Board's response was:

"The Retirement System is currently upgrading the office computers and software to a Windows environment. The financial system is scheduled to be in place in February 2003. Once in place and properly tested the manual system will be eliminated."

The upgrade did not occur as planned and the manual system was not eliminated. The Board has since decided to change software systems and is currently reviewing responses to the RFP's.

Recommendation:

The manual records should be eliminated when the new software system has been implemented.

Board Response:

The Worcester Retirement System (WRS) has a computerized record for each individual member of the system that details weekly, biweekly or monthly contribution as well as interest credited annually to the account. In addition to this automated record the WRS continues to maintain an individual Annuity Savings card for each member by manually recording the total contribution and interest once each year. Impending hardware and software obsolescence triggered the process to upgrade our computer system. The upgrade did not proceed as planned with our previous vendor and as a result an RFP was issued in late 2004. Early this year the WRS voted to hire TACS as our new software provider. Conversion to this new system is expected within a one year time period. Once this new system is operational we look forward to eliminating this manual posting of annuity savings records.

Final Determination

PERAC audit staff will follow up in six (6) months to ensure appropriate actions have been taken regarding all audit findings.

Worcester Retirement System

STATEMENT OF LEDGER ASSETS AND LIABILITIES

**FOR THE THREE YEAR PERIOD BEGINNING JANUARY 1, 2001
AND ENDING DECEMBER 31, 2003**

FOR THE PERIOD ENDING DECEMBER 31,			
ASSETS	2003	2002	2001
Cash	\$7,940,906	\$10,948,686	\$7,934,031
Short Term Investments	0	0	0
Fixed Income Securities (at book value)	89,545,526	73,871,744	106,148,188
Equities	145,601,236	109,692,489	142,030,432
Pooled Short Term Funds	0	0	0
Pooled Domestic Equity Funds	111,321,805	80,214,558	62,497,070
Pooled International Equity Funds	89,517,495	67,413,741	120,036,145
Pooled Global Equity Funds	0	0	0
Pooled Domestic Fixed Income Funds	7,452,904	1,733,711	1,643,821
Pooled International Fixed Income Funds	0	0	31,388,365
Pooled Global Fixed Income Funds	42,303,945	47,822,115	0
Pooled Alternative Investment Funds	24,063,298	17,737,983	16,200,726
Pooled Real Estate Funds	41,718,951	53,057,330	61,286,741
Pooled Domestic Balanced Funds	0	0	0
Pooled International Balanced Funds	0	0	0
PRIT Cash Fund	0	0	0
PRIT Core Fund	0	0	0
Interest Due and Accrued	1,142,072	1,076,272	1,663,663
Accounts Receivable	1,665,054	927,850	1,116,621
Accounts Payable	(3,741,682)	(2,671,404)	(2,642,133)
TOTAL	<u>\$558,531,510</u>	<u>\$461,825,075</u>	<u>\$549,303,669</u>
FUND BALANCES			
Annuity Savings Fund	\$115,779,891	\$111,507,319	\$111,769,704
Annuity Reserve Fund	50,157,812	48,323,511	39,966,111
Pension Fund	145,817,209	167,763,297	192,578,749
Military Service Fund	16,836	19,605	20,541
Expense Fund	0	0	0
Pension Reserve Fund	<u>246,759,763</u>	<u>134,211,343</u>	<u>204,968,563</u>
TOTAL	<u>\$558,531,511</u>	<u>\$461,825,075</u>	<u>\$549,303,669</u>

Worcester Retirement System

STATEMENT OF CHANGES IN FUND BALANCES

**FOR THE THREE YEAR PERIOD BEGINNING JANUARY 1, 2001
AND ENDING DECEMBER 31, 2003**

	Annuity Savings Fund	Annuity Reserve Fund	Pension Fund	Military Service Fund	Expense Fund	Pension Reserve Fund	Total All Funds
Beginning Balance (2001)	\$104,242,043	\$39,172,465	\$216,276,431	\$20,158	\$0	\$238,369,234	\$598,080,331
Receipts	13,799,009	1,343,898	14,009,970	383	3,808,707	(33,704,789)	(742,822)
Interfund Transfers	(4,534,925)	4,244,539	(13,732)	0	0	304,118	0
Disbursements	<u>(1,736,422)</u>	<u>(4,794,791)</u>	<u>(37,693,921)</u>	<u>0</u>	<u>(3,808,707)</u>	<u>0</u>	<u>(48,033,841)</u>
Ending Balance (2001)	111,769,704	39,966,111	192,578,749	20,541	0	204,968,563	549,303,669
Receipts	13,908,653	1,236,699	15,481,722	271	3,449,687	(70,763,027)	(36,685,996)
Interfund Transfers	(11,986,093)	12,000,279	(18,786)	(1,207)	0	5,807	0
Disbursements	<u>(2,184,945)</u>	<u>(4,879,578)</u>	<u>(40,278,388)</u>	<u>0</u>	<u>(3,449,687)</u>	<u>0</u>	<u>(50,792,598)</u>
Ending Balance (2002)	111,507,319	48,323,511	167,763,297	19,605	0	134,211,343	461,825,075
Receipts	12,729,428	1,418,945	21,711,808	167	3,508,888	112,546,682	151,915,918
Interfund Transfers	(6,149,340)	6,155,441	(4,904)	(2,935)	0	1,738	0
Disbursements	<u>(2,307,517)</u>	<u>(5,740,086)</u>	<u>(43,652,993)</u>	<u>0</u>	<u>(3,508,888)</u>	<u>0</u>	<u>(55,209,483)</u>
Ending Balance (2003)	<u>\$115,779,891</u>	<u>\$50,157,812</u>	<u>\$145,817,209</u>	<u>\$16,836</u>	<u>\$0</u>	<u>\$246,759,762</u>	<u>\$558,531,510</u>

Worcester Retirement System

STATEMENT OF INCOME

**FOR THE THREE YEAR PERIOD BEGINNING JANUARY 1, 2001
AND ENDING DECEMBER 31, 2003**

	FOR THE PERIOD ENDING DECEMBER 31,		
	2003	2002	2001
Annuity Savings Fund:			
Members Deductions	\$11,352,580	\$12,048,872	\$11,258,066
Transfers from other Systems	230,678	99,281	425,220
Member Make Up Payments and Redeposits	108,628	244,941	192,179
Investment Income Credited to Member Accounts	<u>1,037,542</u>	<u>1,515,559</u>	<u>1,923,543</u>
Sub Total	<u>12,729,428</u>	<u>13,908,653</u>	<u>13,799,009</u>
Annuity Reserve Fund:			
Investment Income Credited Annuity Reserve Fund	<u>1,418,945</u>	<u>1,236,699</u>	<u>1,343,898</u>
Pension Fund:			
3 (8) (c) Reimbursements from Other Systems	325,672	324,048	312,999
Received from Commonwealth for COLA and Survivor Benefits	2,457,884	2,200,896	4,216,971
Pension Fund Appropriation	<u>18,928,252</u>	<u>12,956,778</u>	<u>9,480,000</u>
Sub Total	<u>21,711,808</u>	<u>15,481,722</u>	<u>14,009,970</u>
Military Service Fund:			
Contribution Received from Municipality on Account of Military Service	0	0	0
Investment Income Credited Military Service Fund	<u>167</u>	<u>271</u>	<u>383</u>
Sub Total	<u>167</u>	<u>271</u>	<u>383</u>
Expense Fund:			
Expense Fund Appropriation	0	0	0
Investment Income Credited to Expense Fund	<u>3,508,888</u>	<u>3,449,687</u>	<u>3,808,707</u>
Sub Total	<u>3,508,888</u>	<u>3,449,687</u>	<u>3,808,707</u>
Pension Reserve Fund:			
Federal Grant Reimbursement	0	0	3,471
Pension Reserve Appropriation	0	0	0
Interest Not Refunded	14,723	19,935	27,668
Excess Investment Income	<u>112,531,959</u>	<u>(70,782,962)</u>	<u>(33,735,928)</u>
Sub Total	<u>112,546,682</u>	<u>(70,763,027)</u>	<u>(33,704,789)</u>
TOTAL RECEIPTS	<u>\$151,915,918</u>	<u>(\$36,685,996)</u>	<u>(\$742,822)</u>

Worcester Retirement System

STATEMENT OF DISBURSEMENTS

**FOR THE THREE YEAR PERIOD BEGINNING JANUARY 1, 2001
AND ENDING DECEMBER 31, 2003**

FOR THE PERIOD ENDING DECEMBER 31,			
	2003	2002	2001
Annuity Savings Fund:			
Refunds to Members	\$948,756	\$974,191	\$1,342,813
Transfers to other Systems	<u>1,358,761</u>	<u>1,210,755</u>	<u>393,610</u>
Sub Total	<u>2,307,517</u>	<u>2,184,945</u>	<u>1,736,422</u>
Annuity Reserve Fund:			
Annuities Paid	5,427,929	4,847,366	4,631,355
Option B Refunds	<u>312,157</u>	<u>32,212</u>	<u>163,435</u>
Sub Total	<u>5,740,086</u>	<u>4,879,578</u>	<u>4,794,791</u>
Pension Fund:			
Pensions Paid			
Regular Pension Payments	21,186,242	18,332,032	17,082,481
Survivorship Payments	2,153,708	2,079,554	1,961,652
Ordinary Disability Payments	404,987	436,372	397,687
Accidental Disability Payments	8,301,378	8,096,443	7,475,156
Accidental Death Payments	2,450,222	2,448,602	2,402,178
Section 101 Benefits	189,689	211,566	210,493
3 (8) (c) Reimbursements to Other Systems	1,544,576	1,617,394	1,393,033
State Reimbursable COLA's Paid	7,422,192	7,056,425	6,771,240
Chapter 389 Beneficiary Increase Paid	<u>0</u>	<u>0</u>	<u>0</u>
Sub Total	<u>43,652,993</u>	<u>40,278,388</u>	<u>37,693,921</u>
Military Service Fund:			
Return to Municipality for Members Who			
Withdrew Their Funds	<u>0</u>	<u>0</u>	<u>0</u>
Expense Fund:			
Board Member Stipend	12,000	12,000	12,000
Salaries	292,277	276,712	273,805
Legal Expenses	68,707	82,559	92,648
Medical Expenses	2,447	850	482
Travel Expenses	2,016	8,631	14,624
Administrative Expenses	51,988	163,359	59,983
Furniture and Equipment	0	20,344	759
Management Fees	2,754,600	2,584,228	2,983,935
Custodial Fees	205,993	183,762	243,062
Fiduciary Insurance	10,859	9,241	7,709
Consultant Fees	<u>108,000</u>	<u>108,000</u>	<u>119,700</u>
Sub Total	<u>3,508,888</u>	<u>3,449,687</u>	<u>3,808,707</u>
TOTAL DISBURSEMENTS	<u>\$55,209,483</u>	<u>\$50,792,598</u>	<u>\$48,033,841</u>

Worcester Retirement System

INVESTMENT INCOME

**FOR THE THREE YEAR PERIOD BEGINNING JANUARY 1, 2001
AND ENDING DECEMBER 31, 2003**

	FOR THE PERIOD ENDING DECEMBER 31,		
	2000	1999	1998
Investment Income Received From:			
Cash	\$80,526	\$76,750	\$223,000
Short Term Investments	0	0	0
Fixed Income	5,396,628	7,270,676	8,981,018
Equities	1,695,517	155,842	1,983,289
Pooled or Mutual Funds	4,435,928	<u>4,081,106</u>	<u>10,303,387</u>
Commission Recapture	<u>30,673</u>	<u>32,934</u>	<u>38,239</u>
TOTAL INVESTMENT INCOME	<u>11,639,272</u>	<u>11,617,308</u>	<u>21,528,933</u>
Plus:			
Realized Gains	21,716,197	8,346,889	21,696,050
Unrealized Gains	110,173,040	28,971,423	45,781,715
Interest Due and Accrued on Fixed Income Securities - Current Year	<u>1,142,072</u>	<u>1,076,272</u>	<u>1,663,663</u>
Sub Total	<u>133,031,309</u>	<u>38,394,584</u>	<u>69,141,428</u>
Less:			
Paid Accrued Interest on Fixed Income Securities	(921,549)	(692,634)	(962,111)
Realized Loss	(8,949,676)	(37,457,437)	(43,699,865)
Unrealized Loss	(15,225,583)	(76,173,906)	(70,809,764)
Interest Due and Accrued on Fixed Income Securities - Prior Year	<u>(1,076,272)</u>	<u>(1,663,663)</u>	<u>(1,858,018)</u>
Sub Total	<u>(26,173,080)</u>	<u>(115,987,638)</u>	<u>(117,329,757)</u>
NET INVESTMENT INCOME	<u>118,497,500</u>	<u>(65,975,747)</u>	<u>(26,659,396)</u>
Income Required:			
Annuity Savings Fund	1,037,542	1,515,559	1,923,543
Annuity Reserve Fund	1,418,945	1,236,699	1,343,898
Military Service Fund	167	271	383
Expense Fund	3,508,888	3,449,687	3,808,707
TOTAL INCOME REQUIRED	<u>5,965,541</u>	<u>6,202,216</u>	<u>7,076,532</u>
Net Investment Income	<u>118,497,500</u>	<u>(65,975,747)</u>	<u>(26,659,396)</u>
Less: Total Income Required	<u>5,965,541</u>	<u>6,202,216</u>	<u>7,076,532</u>
EXCESS INCOME TO THE PENSION RESERVE FUND	<u>\$112,531,959</u>	<u>(\$72,177,962)</u>	<u>(\$33,735,928)</u>

Worcester Retirement System

STATEMENT OF ALLOCATION OF INVESTMENTS OWNED

(percentages by category)

FOR THE THREE YEAR PERIOD ENDING DECEMBER 31, 2003

	MARKET VALUE	PERCENTAGE OF TOTAL ASSETS	PERCENTAGE ALLOWED*
Cash	\$7,940,906	1.42%	100
Short Term	0	0.00%	100
Fixed Income	89,545,526	16.01%	40 - 80
Equities	145,601,236	26.03%	40
Pooled Short Term Funds	0	0.00%	
Pooled Domestic Equity Funds	111,321,805	19.90%	
Pooled International Equity Funds	89,517,495	16.00%	
Pooled Global Equity Funds	0	0.00%	
Pooled Domestic Fixed Income Funds	7,452,904	1.33%	
Pooled International Fixed Income Funds	0	0.00%	
Pooled Global Fixed Income Funds	42,303,945	7.56%	
Pooled Alternative Investment Funds	24,063,298	4.30%	
Pooled Real Estate Funds	41,718,951	7.46%	
Pooled Domestic Balanced Funds	0	0.00%	
Pooled International Balanced Funds	0	0.00%	
PRIT Cash Fund	0	0.00%	
PRIT Core Fund	0	0.00%	100
GRAND TOTALS	<u>\$559,466,066</u>	<u>100.00%</u>	

For the year ending December 31, **2003**, the rate of return for the investments of the **Worcester** Retirement System was 25.43%. For the five-year period ending December 31, **2003**, the rate of return for the investments of the **Worcester** Retirement System averaged 5.08%. For the 19-year period ending December 31, **2003**, since PERAC began evaluating the returns of the retirement systems, the rate of return of the investments of the **Worcester** Retirement System was 10.86%.

Worcester Retirement System

SUPPLEMENTARY INVESTMENT REGULATIONS

FOR THE THREE YEAR PERIOD ENDING DECEMBER 31, 2003

The **Worcester** Retirement System submitted the following supplementary investment regulations, which were approved by PERAC on :

March 6, 1991

20.07(9) Commingled real estate equity funds shall not exceed 10% of the total book value of the portfolio at the time of purchase provided that:

- (a) the board does not participate in the selection of personnel responsible for making real estate investments and should this be required, prior to any participation by the board, the board shall consult with PERA to determine the appropriate course of action, and
- (b) such personnel retain authority in the decision making process, and
- (c) should an investment in a separate account result in the direct ownership of real estate, such shall be permitted only until such time as divestiture is prudent.

June 5, 1991

16.02(3) The Board may incur expenses for investment advice or management of the funds of the system by a qualified investment manager and the board may incur expenses for consulting services, which may include asset allocation studies, investment manager searches and on-going evaluation, trade analysis, performance evaluation and custodian bank searches, provided that any such consultant is registered as an investment adviser pursuant to the Investment Advisers Act of 1940. Such expenses may be charged against earned income from investments provided that the total of such expenses shall not exceed in any one year:

- (a) 1% of the value of the fund for the first 4% million; and
- (b) 0.5% of the value of the fund in excess of \$5 million.

16.02(4) The board may employ a custodian bank and may charge such expenses against earned income from investments provided that such expenses shall not exceed in any one-year .08% of the value of the fund.

March 11, 1992

20.09(1) Venture capital investments shall not exceed 3% of the total market value of the portfolio at the time of the investment provided that in any system with assets in excess of nineteen million dollars, venture capital investments may be made up to an amount equal to 5% of the total market value of the portfolio at the time of investment, shall be considered a separate asset class, and provided further that;

- (a) the board does not participate in the selection of the personnel responsible for making venture capital investments or otherwise exercise discretion in business affairs, and should this be required, prior to any participation by the board, the board shall consult with PERA to determine the appropriate course of action;
- (b) such personnel retain authority in the decision making process; and
- (c) should an investment in venture capital result in the direct ownership of securities, such shall be permitted only until such time as divestiture is prudent.

20.09(2) Venture capital investments shall only be made in venture capital funds operated by venture capital firms having their principal places of business in the United States.

20.09(3) All venture capital investments shall be made in companies which have their principal places of business in the United States.

Worcester Retirement System

SUPPLEMENTARY INVESTMENT REGULATIONS (CONTINUED)

FOR THE THREE YEAR PERIOD ENDING DECEMBER 31, 2003

April 6, 1992

20.07(6) Turnover of equity investments shall not exceed 100%, annually, as measured by the greater of purchases or sales relative to beginning market value.

February 4, 1993

20.04(1) United States based corporations, equities of foreign corporations, and fixed income Canadian securities, provided that:

(a) all such Canadian securities are denominated in U.S. currency and issued and traded in U.S. markets, and the total of all such securities shall be considered part of the board's fixed income asset allocation and shall not exceed 5% of the total market value of the portfolio.

20.04(6) American Depositary Receipts denominated in U.S. currency and listed in the New York Stock Exchange, provided that the total of all such investments shall be considered part of the board's equity asset allocation and shall not exceed 5% of the total market value of the portfolio.

October 12, 1995

20.06(2) Bonds shall have a minimum quality rating of Baa or equivalent as rated by one or more recognized bond rating services, however, 6% of the market value of the total portfolio may be invested in bonds with a minimum quality rating of B or equivalent as rated by one or more recognized bond rating services.

20.06(4) Fixed income holdings which are downgraded by one or more recognized rating services to below a Baa or equivalent rating must be sold within a reasonable period of time not to exceed one year, however, 6% of the market value of the total portfolio may be invested in bonds with a minimum quality rating of B or equivalent.

January 25, 1996

20.08(e) Enrollment in the Securities Lending Program offered by Bank Boston provided that the lending of securities is limited to brokers, dealers, and financial institutions and that the loan is collateralized by cash or United States Government securities according to applicable regulatory requirements.

November 6, 1996

20.03(2) At least 20% but no more than 80% of the total portfolio valued at market shall consist of fixed income investments with a maturity of more than one year including international fixed income investments which shall be limited to 15% of the total portfolio valued at market, [(subject to 20.03(4))] and Yankee Bonds which shall be limited to 5% of the total fixed income portfolio valued at market.

June 11, 1997

20.03(1) Equity investments shall not exceed 70% of the total portfolio valued at market, including international equities, which shall not exceed 20% of the total portfolio valued at market. (Subject to CMR 20.03(4))

20.03(4) International investments shall not exceed 25% of the total portfolio valued at market.

Worcester Retirement System

SUPPLEMENTARY INVESTMENT REGULATIONS (CONTINUED)

FOR THE THREE YEAR PERIOD ENDING DECEMBER 31, 2003

October 5, 1999

16.8 In accordance with PERAC Investment Guideline 99-3, the Worcester Retirement Board may invest in Ascent Venture Partners III, L.P. The system is an investor in Ascent Venture Partners II, L.P. and has submitted the required documentation to justify investing in Ascent Venture Partners III.

November 8, 1999

21.01 In accordance with PERAC Investment Guideline 99-1, the Worcester Retirement System may invest in the Payden & Rygel Global Fixed Income Fund. This fund has the authority to use futures and options to a limited extent as a temporary duration management tool. The exemption for this fund was approved by PERAC on September 29, 1999.

March 20, 2000

16.08 In accordance with PERAC Investment Guideline 99-3, the Worcester Retirement System may invest in Boston Millennia Partners II, L.P. The System has not been invested in Boston Millennia Partners (BMP) I but information provided by the System, by the System's Investment Consultant, and by the manager indicates that BMP II can be reasonably considered a successor fund to one of the System's existing funds, Boston Capital Ventures (BCV) III. The general partners and other key managers of BMP are essentially the same team that managed BCV III. These men, led by Managing General Partner Dana Callow, Jr., created BMP in 1997, working initially in the same office Space, and still maintain management responsibility for the investments in BVC III. Also, the investment objective of BMP II is the same as for BCV III.

April 6, 2000

16.08 In accordance with PERAC Investment Guideline 99-2, the Worcester Retirement Board may re-allocate 50% of the assets currently invested in the SSGA S&P 500 Flagship Fund into the SSGA Equal Weighted S&P 500 Fund. Under this modification, the Board will be invested in the same universe of stocks but will reduce its exposure to large capitalization growth stocks and increase its exposure to the smaller stocks within the S&P 500 Index. The board believes this modification will decrease its exposure to stocks that may be over-valued and increase its exposure to stocks that may represent better value.

October 19, 2000

16.08 The Worcester Retirement System may invest in the Standard Life European Strategic Partners Fund. This is an alternative investments "fund-of-funds" in which, according to an agreement between the Board and Standard Life, decisions as to the actual selection of investment partnerships will be made by Standard Life in a process not overseen by the Board. The Board will periodically monitor the selection process used by Standard Life.

Worcester Retirement System

SUPPLEMENTARY INVESTMENT REGULATIONS (CONTINUED)

FOR THE THREE YEAR PERIOD ENDING DECEMBER 31, 2003

August 14, 2001

16.08 In accordance with Investment Guideline 99-2, the Worcester Retirement Board is authorized to modify its fixed income management mandate with Loomis Sayles. The existing mandate calls for Loomis to invest in “high yield” corporate bonds and lower-investment-grade corporate bonds in approximately equal amounts. In order to simplify the board’s portfolio structure, the lower-investment-grade portion of the account will be eliminated and Loomis will concentrate on high- yield bonds. The board has had a satisfactory relationship with Loomis Sayles for over five years and the firm is recognized within the industry as a leading manager of high-yield bonds.

June 13, 2001

16.08 In accordance with PERAC Investment Guideline 99-2, the Worcester Retirement Board may modify its international equity mandate with The Boston Company. The Board currently invests in TBC’s International Equity Pooled Fund and TBC makes small tactical allocations to emerging markets through its Emerging Markets Pooled Fund. TBC has created a single commingled fund, the Pooled Employees International ACWI (ex U.S.) Equity Fund by which to accomplish the same investment strategy in a more efficient manner. The Board will incur no cost or change in fees by making this modification.

September 22, 2003

16.08 The Worcester Retirement Board is authorized to make a modest modification to its high-yield investment mandate with Loomis Sayles. This modification involves no change in the overall investment objective or in the account’s benchmark. Under this modification, Loomis Sayles is authorized to invest in senior loans (“bank loans”) up to 20% of the market value of the account. These are loans that are made by banks to the same universe of companies that comprises the high yield market. Because these loans are typically senior in the capital structure as well as secured by collateral, they typically have better default recovery rates and superior risk-adjusted performance than conventional high-yield bonds. Also, since these loans are adjustable-rate in nature, they have very little volatility from interest-rate changes. Thus, it is expected that the inclusion of senior loans will help to preserve principal and reduce volatility in the high-yield portfolio.

September 22, 2003

16.08 Under the terms of Investment Guideline 99-2, the Worcester Retirement System is authorized to make a minor modification to its investment-grade fixed income mandate with Opus Investment Management. Under this change, Opus will create a separate account for Treasury Inflation-Protected Securities (TIPS), a segment of the market included in the universe the firm currently manages. Since the United States has issued only ten offerings of TIPS bonds and the account will not require active management, Opus will manage this account for a fee of only 0.10% which is lower than the fee for the system’s existing core bond account.

Worcester Retirement System

SUPPLEMENTARY INVESTMENT REGULATIONS (CONTINUED)

FOR THE THREE YEAR PERIOD ENDING DECEMBER 31, 2003

October 20, 2003

16.08 In accordance with PERAC Investment Guideline 99-3, the Worcester Retirement Board is authorized to invest in the Riverside Capital Appreciation Fund 2003. This is the immediate successor fund to the Riverside Capital Appreciation Fund 2000, in which the Board invested in 2001. The earlier fund has had strong performance to date and the new fund is to be managed by the same investment team and with the same investment objectives.

October 27, 2003

16.08 In accordance with PERAC Investment Guideline 99-3, the Worcester Retirement Board may invest in the Ascent Venture Partners IV Fund. The board has been an investor in Ascent's two predecessor funds and the investment results from those two partnerships have been satisfactory to date.

February 25, 2004

19.01(6) Notwithstanding the provisions of Public Employee Retirement Administration Commission regulations, the City of Worcester Retirement Board may invest funds of the City of Worcester Retirement System (the "System") with a real estate investment fund, as contemplated by 840 CMR 19.01(4)-(6), known as Heitman Value Partners, L.P. ("the Fund"), and while the funds of the System are so invested the assets of the System shall be deemed to include, for purposes of applying the rules set forth in 840 CMR 16.00 et seq. and 17.00 et seq.; the System's interest in the Fund but not any of the underlying assets of the Fund; provided that, at all times, the Fund qualifies as a "real estate operating company" or venture capital operating company" within the meaning of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), and the regulations promulgated hereunder, or the assets of the Fund otherwise would not be treated as subject to ERISA.

January 31, 2005

16.08 In accordance with Investment Guideline 99-2, the Worcester Retirement Board is authorized to make a modest modification to its large cap equity index mandate with State Street Global Advisors. Standard & Poor's has announced that it will be adopting a free-float methodology for all their U.S. equity indexes, with final implementation scheduled for September 2005. In order to help address concerns over the possible market impact of this rebalancing, S&P has created provisional indexes. In hopes of avoiding whatever market impacts might be caused by the full transformation later this year, the Worcester Retirement Board has decided to switch from SSGA's S&P 500 Index Fund to the SSGA S&P 500 Flagship Securities Lending Provisional Fund.

Worcester Retirement System

NOTES TO FINANCIAL STATEMENTS

FOR THE THREE YEAR PERIOD ENDING DECEMBER 31, 2003

NOTE 1 - THE SYSTEM

The plan is a contributory defined benefit plan covering all **Worcester Retirement System** member unit employees deemed eligible by the retirement board, with the exception of school department employees who serve in a teaching capacity. The Teachers' Retirement Board administers the pensions of such school employees.

Instituted in 1937, the System is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of the Massachusetts General Laws. Membership in the plan is mandatory immediately upon the commencement of employment for all permanent, full-time employees.

The system provides for retirement allowance benefits up to a maximum of 80% of a member's highest three year average annual rate of regular compensation. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

Members become vested after ten years of creditable service. A superannuation retirement allowance may be received upon the completion of twenty years of service or upon reaching the age of 55 with ten years of service. Normal retirement for most employees occurs at age 65 (for certain hazardous duty and public safety positions, normal retirement is at age 55).

A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and a portion of the interest they generate constitute the annuity. The differential between the total retirement benefit and the annuity is the pension. The average retirement benefit is approximately 75 - 85% pension and 15 - 25% annuity.

Active members contribute either 5, 7, 8, or 9% of their gross regular compensation. Members joining the retirement system after January 1, 1979 must contribute an additional 2% on regular compensation earned at a rate in excess of \$30,000. The percentage rate is keyed to the date upon which an employee's membership commences. These deductions are deposited in the Annuity Savings Fund and earn interest at a rate determined by the Executive Director of PERAC according to statute. When a member's retirement becomes effective, his/her deductions and related interest are transferred to the Annuity Reserve Fund. Any cost-of-living adjustment granted between 1981 and 1997 and any increase in other benefits imposed by state law during that period are borne by the state.

The pension portion of any retirement benefit is paid from the Pension Fund of the System. The governmental unit employing the member must annually appropriate and contribute the amount of current year pension payments as indicated on the most recent funding schedule as approved by PERAC's Actuary. Until recently, retirement systems were paying only the actual retirement

Worcester Retirement System

NOTES TO FINANCIAL STATEMENTS (Continued)

FOR THE THREE YEAR PERIOD ENDING DECEMBER 31, 2003

benefits that were due each year. Systems had no statutory authorization to put aside any money for the future benefits of employees who are now working. Large unfunded liabilities resulted from operating upon this pay-as-you-go basis. In 1977, legislation authorized local governments to appropriate funds to meet future pension obligations.

In 1983, additional legislation was passed requiring the transfer of investment earnings (in excess of the amount credited to member accounts) into the Pension Reserve Fund. These initiatives have significantly reduced the rate of growth of the retirement systems' unfunded liabilities, and in some systems have actually eliminated such liability.

Administrative expenses are funded through investment income of the system.

Members who become permanently and totally disabled for further duty may be eligible to receive a disability retirement allowance. The amount of benefits to be received in such cases is dependent upon several factors including: whether or not the disability is work related, the member's age, years of creditable service, level of compensation, veteran's status, and group classification.

Employees who resign from service and who are not eligible to receive a retirement allowance or are under the age of 55 are entitled to request a refund of their accumulated total deductions. In addition, depending upon the number of years of creditable service, such employees are entitled to receive either zero (0%) percent, fifty (50%) percent, or one hundred (100%) percent of the regular interest which has accrued upon those deductions. Survivor benefits are extended to eligible beneficiaries of members whose death occurs prior to or following retirement.

NOTE 2 - SIGNIFICANT ACCOUNTING POLICIES

The accounting records of the System are maintained on a calendar year basis in accordance with the standards and procedures established by the Executive Director of Public Employee Retirement Administration Commission.

The Annuity Savings Fund is the fund in which members' contributions are deposited. Active members contribute either 5, 7, 8, or 9% of their gross regular compensation. Voluntary contributions, redeposits, and transfers to and from other systems, are also accounted for in this fund. Members' contributions to the fund earn interest at a rate determined by PERAC. Interest for some members who withdraw with less than ten years of service is transferred to the Pension Reserve Fund. Upon retirement, members' contributions and interest are transferred to the Annuity Reserve Fund. Dormant account balances must be transferred to the Pension Reserve Fund after a period of ten years of inactivity.

Worcester Retirement System

NOTES TO FINANCIAL STATEMENTS (Continued)

FOR THE THREE YEAR PERIOD ENDING DECEMBER 31, 2003

The Annuity Reserve Fund is the fund to which a member's account is transferred upon retirement from the Annuity Savings Fund and Special Military Service Credit Fund. The annuity portion of the retirement allowance is paid from this fund. Interest is credited monthly to this fund at the rate of 3% annually on the previous month's balance.

The Special Military Service Credit Fund contains contributions and interest for members while on a military leave for service in the Armed Forces who will receive creditable service for the period of that leave.

The Expense Fund contains amounts transferred from investment income for the purposes of administering the retirement system.

The Pension Fund contains the amounts appropriated by the governmental units as established by PERAC to pay the pension portion of each retirement allowance.

The Pension Reserve Fund contains amounts appropriated by the governmental units for the purposes of funding future retirement benefits. Any profit or loss realized on the sale or maturity of any investment or on the unrealized gain of a market valued investment as of the valuation date is credited to the Pension Reserve Fund. Additionally, any investment income in excess of the amount required to credit interest to the Annuity Savings Fund, Annuity Reserve Fund, and Special Military Service Credit Fund is credited to this Reserve account.

The Investment Income Account is credited with all income derived from interest and dividends of invested funds. At year-end the interest credited to the Annuity Savings Fund, Annuity Reserve Fund, Expense Fund, and Special Military Service Credit Fund is distributed from this account and the remaining balance is transferred to the Pension Reserve Fund.

NOTE 3 - SUPPLEMENTARY MEMBERSHIP REGULATIONS

The **Worcester Retirement System** submitted the following supplementary membership regulations, which were approved by PERAC on:

August 16, 1990

Election Rules

Any active, inactive or retired member may qualify as a candidate by filing with the retirement board nomination papers containing the signatures and address of at least fifty

(50) members of the Retirement System. Regulation in effect for the 1990 Retirement Board Election only.

Worcester Retirement System

NOTES TO FINANCIAL STATEMENTS (Continued)

FOR THE THREE YEAR PERIOD ENDING DECEMBER 31, 2003

NOTE 3 - SUPPLEMENTARY MEMBERSHIP REGULATIONS(Continued)

March 29, 1993

Membership

All part-time, provisional, temporary or intermittent employees who are regularly scheduled to work twenty (20) or more hours per week are required to become members of the Worcester Retirement System and to make weekly contributions to the system pursuant to G.L. c. 32, §22 (1)(b). Those employees who are not regularly scheduled to work at least twenty (20) hours per week will not be allowed membership in the Worcester Retirement System.

February 17, 1998

Recovery of Earnings

Recovery of earnings in excess of limitations set forth in M.G.L. c. 32, s. 91A. Disabled members of the Worcester Retirement System whose calendar year earnings exceed an amount which when added to the member's retirement allowance is greater than the amount of regular compensation which would have been payable to such member if such member had continued in service in the grade held by him at the time he was retired plus the sum of five thousand dollars, must refund to the Worcester Retirement System the amount of said overearnings in either a lump-sum or, in the alternative, if the member can demonstrate that a lump-sum payment would result in financial hardship, a monthly payment schedule of not more than six months, provided the member amply demonstrates financial hardship to the Board's satisfaction.

July 27, 1998

Payments

Effective September 1, 1998, all retirement payments made by the Worcester Retirement System shall be made by electronic funds transfer. This will be a direct deposit system and shall apply to all amounts payable to the Worcester Retirement Systems members and beneficiaries. **(AMENDED FEBRUARY 22, 1999).**

February 22, 1999

Payments Effective September 1, 1998 all retirement payments made by the Worcester Retirement System [may] be made by electronic funds transfer. This will be a direct deposit system and [may] apply to all amounts payable to Worcester Retirement Systems members and beneficiaries. This provision is not mandatory for any member or beneficiary of the Worcester Retirement System. The Worcester Retirement Boards will provide electric fund transfer notices to retirees when they first enroll in the program; any time there is a change in their monthly amount and at year-end (12/31).

Worcester Retirement System

NOTES TO FINANCIAL STATEMENTS (Continued)

FOR THE THREE YEAR PERIOD ENDING DECEMBER 31, 2003

NOTE 4 - ADMINISTRATION OF THE SYSTEM

The System is administered by a five person Board of Retirement consisting of the City Auditor who shall be a member ex officio, a second member appointed by the governing authority, a third and fourth member who shall be elected by the members in or retired from the service of such system, and a fifth member appointed by the other four board members.

Ex officio Member: James DelSignore

Appointed Member: Stephen Wentzell Term Expires: Indefinite

Elected Member: Elizabeth Early Term Expires: 10/31/07

Elected Member: Raymond McGrath Term Expires: 12/31/05

Appointed Member: Thomas Wade Term Expires: 12/31/07

The Board members are required to meet at least once a month. The Board must keep a record of all of its proceedings. The Board must annually submit to the appropriate authority an estimate of the expenses of administration and cost of operation of the system. The board must annually file a financial statement of condition for the system with the Executive Director of PERAC.

The investment of the system's funds is the responsibility of the Board. All retirement allowances must be approved by the Retirement Board and are then submitted to the PERAC Actuary for verification prior to payment. All expenses incurred by the System must be approved by at least two members of the Board.

The following retirement board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts as follows:

Treasurer - Custodian:)	
Ex officio Member:)	\$50,000,000/\$1,000,000
Elected Member:)	MACRS Policy
Appointed Member:)	
Staff Employee:)	

Worcester Retirement System

NOTES TO FINANCIAL STATEMENTS (Continued)

FOR THE THREE YEAR PERIOD ENDING DECEMBER 31, 2003

NOTE 5 - ACTUARIAL VALUATION AND ASSUMPTIONS

The most recent actuarial valuation of the System was prepared by the **Segal Company** as of **January 1, 2004**.

The actuarial liability for active members was	\$319,630,612
The actuarial liability for vested terminated members was	5,902,406
The actuarial liability for retired members was	<u>418,037,422</u>
The total actuarial liability was	743,570,440
System assets as of that date were	<u>577,123,067</u>
The unfunded actuarial liability was	<u>\$166,447,373</u>
 The ratio of system's assets to total actuarial liability was	 77.6%
As of that date the total covered employee payroll was	\$138,796,895

The normal cost for employees on that date was 8.34% of payroll

The normal cost for the employer was 5.47% of payroll

The principal actuarial assumptions used in the valuation are as follows:

Investment Return: 8.50% per annum

Rate of Salary Increase: 5.00% per annum

GASB STATEMENT NO. 25, DISCLOSURE INFORMATION AS OF JANUARY 1, 2004

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Cov. Payroll ((b-a)/c)
1/1/2004	\$577,123,067	\$743,570,440	\$166,447,373	77.6%	\$138,796,895	119.92%
1/1/2003	554,190,090	715,855,564	161,665,474	77.4%	142,802,508	113.21%
1/1/2002	620,814,307	671,876,943	51,062,636	92.4%	148,764,543	34.32%
1/1/2001	630,714,618	628,681,483	(2,033,135)	100.3%	136,000,517	-1.49%

Worcester Retirement System

NOTES TO FINANCIAL STATEMENTS (Continued)

FOR THE THREE YEAR PERIOD ENDING DECEMBER 31, 2003

NOTE 6 - MEMBERSHIP EXHIBIT

Retirement in Past Years	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Superannuation	*	73	73	61	76	53	77	63	196	89
Ordinary Disability	*	2	1	0	1	1	2	2	1	2
Accidental Disability	*	6	5	7	14	11	13	17	15	12
Total Retirements	*	81	79	68	91	65	92	82	212	103
Total Retirees, Beneficiaries and Survivors	*	3,090	3,044	2,994	2,985	2,979	2,946	2,905	2,995	2,991
Total Active Members	*	3,352	3,469	3,549	3,505	3,569	3,896	4,069	3,628	3,345
Pension Payments										
Superannuation	\$25,185,689	\$14,527,337	\$15,305,119	\$15,503,544	\$15,810,293	\$16,157,845	\$16,423,542	\$17,082,481	\$18,332,032	\$21,186,242
Survivor/Beneficiary Payments	*	1,030,955	1,021,951	1,044,270	1,009,788	1,030,729	1,244,324	1,961,652	2,079,554	2,153,708
Ordinary Disability	*	526,222	560,334	554,302	557,948	572,867	430,916	397,687	436,372	404,987
Accidental Disability	*	6,814,039	6,542,469	6,647,358	6,791,764	6,903,287	7,354,476	7,475,156	8,096,443	8,301,378
Other	<u>896,841</u>	<u>2,674,029</u>	<u>2,771,934</u>	<u>2,737,989</u>	<u>2,810,044</u>	<u>2,883,919</u>	<u>3,108,352</u>	<u>10,776,945</u>	<u>11,333,986</u>	<u>11,606,678</u>
Total Payments for Year	<u>\$26,082,530</u>	<u>\$25,572,582</u>	<u>\$26,201,807</u>	<u>\$26,487,463</u>	<u>\$26,979,837</u>	<u>\$27,548,647</u>	<u>\$28,561,610</u>	<u>\$37,693,921</u>	<u>\$40,278,388</u>	<u>\$43,652,993</u>

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